

ARCS PROCEDURE:	RESET - RSR A/D CALIBRATION PROCEDURE	PRO(RSR)-007.002
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## RESET - RSR A/D Calibration Procedure

### I. Purpose:

The purpose of this procedure is to describe the steps performed by the RESET team to calibrate the MFRSR data logger A/D.

### II. Cautions and Hazards:

None.

### III. Requirements:

- Do not attempt this procedure when it is raining or likely to rain.
- Calibrated precision voltmeter.
- Calibrated precision voltage source.

### IV. Procedure:

#### A. Steps:

1. Notify data system personnel of calibration.
2. Disconnect the sensor from the MFRSR datalogger.
3. Turn on the voltage standard and set it for 4.096 V.
4. Attach the voltage standard to the logger input.
5. Read the voltage with the calibrated voltmeter at IC-10 (see diagram) and log the voltage measured.
6. Log the output of the datalogger.
7. If the measured voltage at IC-10 is different from 4.096 V and the output is different from 4096, adjust the potentiometer R-12 (see diagram) until the output of the datalogger is 4096.

### V. References:

1. "Automated Multifilter Rotating Shadow-Band Radiometer: An Instrument for Optical Depth and Radiation Measurements," by L. Harrison, J. Michalsky and J. Berndt, Applied Optics, 33(22), 1994.
2. "Yankee Environmental Systems Optical Calibration Facilities," Yankee Environmental Systems Report, 1994.

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**VI. Attachments:**

1. MFRSR Logger Printed Circuit Board

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## Attachment 1

### MFRSR LOGGER PRINTED CIRCUIT BOARD R/D Reference Voltage Heater Voltage Filter Detector Logger Board Gain Resistors ADC Reference Voltage Adjustment Heater Voltage Adjustment

